## Fusion Proteins for Targeted Delivery of Antimicrobial Peptides.ST25.txt SEQUENCE LISTING

```
<110> Shi, Wenyuan
      Anderson, Maxwell
      Morrison, Sherie
      Trinh, Kham
      Wims, Letitia
      Chen, Li
<120> Fusion Proteins for Targeted Delivery of Antimicrobial Peptides
<130> 22851-033
<150> US 09/378,577
<151> 1999-08-20
<160> 15
<170>
      PatentIn version 3.1
210> 1
2211> 563
€212> DNA
$\frac{1}{6}213> Synthetic-Murine
220>
[$\frac{1}{5}\] CDS
<u>2</u>222> (69)..(140)
223> Histatin 5
.
.
220>
₹221> CDS
<222> (141)..(188)
<223> Linker Peptide
<220>
<221> CDS
<222> (189)..(563)
<223> VH of SWLA3
<400>
ggatatccac catggacttc gggttgagct tggttttcct tgtccttact ttaaaaggtg
                                                                        60
tccagtgt gat agc cac gct aag cgg cac cac gga tat aag cgg aag ttc
                                                                        110
          Asp Ser His Ala Lys Arg His His Gly Tyr Lys Arg Lys Phe
```

Fusi	on E	rote 1	eins	for	Targ	eted 5	Del	iver	y of	Ant	imic 10	robi	al E	Pepti	des.ST25	.txt
cac His 15	gag Glu	aag Lys	cac His	cac His	tcg Ser 20	cac His	aga Arg	gga Gly	tac Tyr	tct Ser 25	ggt Gly	ggc Gly	ggt Gly	ggc Gly	tcg Ser 30	158
ggc Gly	gga Gly	ggt Gly	Gly 393	tcg Ser 35	ggt Gly	ggc Gly	ggc Gly	gga Gly	tcc Ser 40	gac Asp	gtg Val	aag Lys	ctt Leu	gtg Val 45	gag Glu	206
tct Ser	Gly aaa	gga Gly	ggc Gly 50	tta Leu	gtg Val	aac Asn	cct Pro	gga Gly 55	gly ggg	tcc Ser	ctg Leu	aaa Lys	ctc Leu 60	tcc Ser	tgt Cys	254
gca Ala	gcc Ala	tct Ser 65	gga Gly	ttc Phe	act Thr	ttc Phe	agt Ser 70	agc Ser	tat Tyr	acc Thr	atg Met	tct Ser 75	tgg Trp	gtt Val	cgc Arg	302
Cag Cln	act Thr 80	ccg Pro	gag Glu	aag Lys	agg Arg	ctg Leu 85	gag Glu	tgg Trp	gtc Val	gca Ala	tcc Ser 90	att Ile	agt Ser	agt Ser	ggt Gly	350
ogt Gly 95	act Thr	tac Tyr	acc Thr	tac Tyr	tat Tyr 100	cca Pro	gac Asp	agt Ser	gtg Val	aag Lys 105	ggc Gly	cga Arg	ttc Phe	acc Thr	atc Ile 110	398
tcc ser	aga Arg	gac Asp	aat Asn	gcc Ala 115	aag Lys	aac Asn	acc Thr	ctg Leu	tac Tyr 120	ctg Leu	caa Gln	atg Met	acc Thr	agt Ser 125	Leu	446
lag Lys	tct Ser	gag Glu	gac Asp 130	Thr	gcc Ala	atg Met	tat Tyr	tac Tyr 135	tgt Cys	tca Ser	aga Arg	gat Asp	gac Asp 140	GIY	tcc Ser	494
tac Tyr	gga	tcc Ser 145	Tyr	tac Tyr	tat Tyr	gct Ala	atg Met 150	Asp	tac Tyr	tgg Trp	ggt Gly	caa Gln 155	. GIY	acc Thr	tca Ser	542
		gtc Val														563
<21 <21 <21 <21	1> 2>	2 24 PRT Synt	heti	.c-Mu	ırine											

Fusion Proteins for Targeted Delivery of Antimicrobial Peptides.ST25.txt <400> Asp Ser His Ala Lys Arg His His Gly Tyr Lys Arg Lys Phe His Glu 10 Lys His His Ser His Arg Gly Tyr 20 3 <210> <211> 16 <212> PRT Synthetic-Murine <213> <400> 3 Ser Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Ser 10 1 ≥210> 4 ₹211> 125 [⊴212> PRT Synthetic-Murine **213**> <400> Asp Val Lys Leu Val Glu Ser Gly Gly Gly Leu Val Asn Pro Gly Gly 10 1 L. Ser Leu Lys Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr 20 25 30 Thr Met Ser Trp Val Arg Gln Thr Pro Glu Lys Arg Leu Glu Trp Val 45 Ala Ser Ile Ser Ser Gly Gly Thr Tyr Thr Tyr Tyr Pro Asp Ser Val 55 60 50 Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Thr Leu Tyr 80 70 75 65

Fusion Proteins for Targeted Delivery of Antimicrobial Peptides.ST25.txt Leu Gln Met Thr Ser Leu Lys Ser Glu Asp Thr Ala Met Tyr Tyr Cys 85 Ser Arg Asp Asp Gly Ser Tyr Gly Ser Tyr Tyr Tyr Ala Met Asp Tyr 110 105 100 Trp Gly Gln Gly Thr Ser Val Thr Val Ser Ser Ala Ser 125 120 115 <210> 5 <211> 533 <212> DNA <213> Synthetic-Murine <220> CDS **€**221> (69)..(110) ₹222> ₹223> Dhvar 1 1 <u>|</u>| 220> CDS k221> (111)..(158)Ck222> \$ <223> Linker Peptide ×, .... **←**220> 221> CDS []<222> (159)..(533) ₹223> VH of SWLA3 <400> 5 ggatatccac catggacttc gggttgagct tggttttcct tgtccttact ttaaaaggtg 60 tccagtgt aag cgg ctg ttt aag gag ctc aag ttc agc ctg cgc aag tac 110 Lys Arg Leu Phe Lys Glu Leu Lys Phe Ser Leu Arg Lys Tyr 5 1 tct ggt ggc ggt ggc tcg ggc gga ggt ggg tcg ggt ggc gga tcc 1.58 Ser Gly Gly Gly Ser Gly Gly Gly Gly Gly Gly Gly Gly Ser 15 206 gac gtg aag ctt gtg gag tct ggg gga ggc tta gtg aac cct gga ggg Asp Val Lys Leu Val Glu Ser Gly Gly Gly Leu Val Asn Pro Gly Gly

Page 4

Fusi	on I	?rote	eins	for 35	Targ	jeted	l Del	.iver	y of 40	Ant	imic	robi	al E	Pepti 45	des.	ST25.	txt
tcc Ser	ctg Leu	aaa Lys	ctc Leu 50	tcc Ser	tgt Cys	gca Ala	gcc Ala	tct Ser 55	gga Gly	ttc Phe	act Thr	ttc Phe	agt Ser 60	agc Ser	tat Tyr		254
acc Thr	atg Met	tct Ser 65	tgg Trp	gtt Val	cgc Arg	cag Gln	act Thr 70	ccg Pro	gag Glu	aag Lys	agg Arg	ctg Leu 75	gag Glu	tgg Trp	gtc Val		302
gca Ala	tcc Ser 80	att Ile	agt Ser	agt Ser	ggt Gly	ggt Gly 85	act Thr	tac Tyr	acc Thr	tac Tyr	tat Tyr 90	cca Pro	gac Asp	agt Ser	gtg Val		350
aag Lys 95	ggc Gly	cga Arg	ttc Phe	acc Thr	atc Ile 100	tcc Ser	aga Arg	gac Asp	aat Asn	gcc Ala 105	aag Lys	aac Asn	acc Thr	ctg Leu	tac Tyr 110		398
ctg Leu	caa Gln	atg Met	acc Thr	agt Ser 115	ctg Leu	aag Lys	tct Ser	gag Glu	gac Asp 120	aca Thr	gcc Ala	atg Met	tat Tyr	tac Tyr 125	tgt Cys		446
dtiser	aga Arg	gat Asp	gac Asp 130	ggc Gly	tcc Ser	tac Tyr	ggc Gly	tcc Ser 135	tat Tyr	tac Tyr	tat Tyr	gct Ala	atg Met 140	gac Asp	tac Tyr		494
tgg Trp	ggt Gly	caa Gln 145	gga Gly	acc Thr	tca Ser	gtc Val	acc Thr 150	gtc Val	tct Ser	tca Ser	gct Ala	agc Ser 155					533
21 21 21 21	1 > 2 >	6 14 PRT Synt	heti	c-Mu	rine												
<40 Lys 1		6 Leu	Phe	Lys 5	Glu	Leu	Lys	Phe	Ser 10	Leu	Arg	Lys	Tyr				
<21 <21 <21 <21	1> 2>	7 16 PRT Synt	heti	c-Mu	rine												
<40	0>	7															

Fusion Proteins for Targeted Delivery of Antimicrobial Peptides.ST25.txt Ser Gly Gly Gly Ser Gly Gly Gly Ser Gly Gly Gly Ser 10 5 <210> 8 <211> 125 PRT <212> Synthetic-Murine <213> <400> 8 Asp Val Lys Leu Val Glu Ser Gly Gly Gly Leu Val Asn Pro Gly Gly 10 5 Ser Leu Lys Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Tyr 30 20 L. Thr Met Ser Trp Val Arg Gln Thr Pro Glu Lys Arg Leu Glu Trp Val 40 35 Ala Ser Ile Ser Ser Gly Gly Thr Tyr Thr Tyr Tyr Pro Asp Ser Val 60 55 50 (ii Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Thr Leu Tyr 70 **№**65 LI. Leu Gln Met Thr Ser Leu Lys Ser Glu Asp Thr Ala Met Tyr Tyr Cys 95 90 85 Ser Arg Asp Asp Gly Ser Tyr Gly Ser Tyr Tyr Tyr Ala Met Asp Tyr 110 105 100 Trp Gly Gln Gly Thr Ser Val Thr Val Ser Ser Ala Ser 125 120 115

<210> 9

<211> 89

<212> DNA

<213> Synthetic

Fusion Pro	teins for T	Cargeted Del:	ivery of A	antimicrobial	Peptides.ST2	5.txt
<400> 9 caccactcgo	c acagaggata	a ctctggtggc	ggtggctcg	g gcggaggtgg	gtcgggtggc	60
ggcggatccg	g acgtgaagct	tgtggagtc				89
<210> 10 <211> 84 <212> DNA <213> Syr						
<400> 10 ggtgtccagt	t gtgatagcc	a cgctaagcgg	caccacgga	at ataagcggaa	gttccacgag	60
aagcaccact	cgcacagag	g atac				84
	A nthetic					
	c atggacttc	g ggttgagctt	ggttttcc	tt gtccttactt	taaaaggtgt	60
j ccagtgtga l	t agcc					74
<pre>210&gt; 12 2211&gt; 87 2212&gt; DN 2213&gt; Sy</pre>	A					
<400> 12	q cqcaaqtac	t ctggtggcgg	, tggctcgg	gc ggaggtgggt	: cgggtggcgg	60
	c gtgaagctt					87
<210> 13 <211> 69 <212> DN <213> Sy	Ā					
<400> 13		rt ccantotaar	r caactatt	ta aggageteaa	a gttcagcctg	60

Fusion cgcaagt	Proteins for Targeted Delivery of Antimicrobial Peptides.ST25.tac	txt 69
<212>	14 65 DNA Synthetic	
<400> ggatato	14 ccac catggacttc gggttgagct tggttttcct tgtccttact ttaaaaggtg	60
tccag		65
<212>	15 39 DNA Synthetic	
Carl from the first for the first flow of the first flow from the first flow flow from the first flow from the first flow flow flow flow flow flow flow flow	15 gacw gatggggstg ttgtgctagc tgaggagac	39
in Bull Hall He alter the first		